

## **CLAIMS**

What is claimed is:

1. A method of linking domain knowledge to document knowledge, comprising:

5 rendering document knowledge as textual components with variable fields;  
building an object-oriented domain model including domain knowledge; and  
linking said document knowledge to said domain knowledge.

2. The method according to claim 1, wherein variables in said document are linked to elements

in said domain model, such that if rules and constraints are tailored or developed to maintain  
10 consistency of the domain model, the document model will be affected.

3. The method according to claim 1, wherein elements in the domain model influence what  
appears in a rendered document.

4. The method according to claim 1, wherein said domain model comprises an explicit domain  
model which is reusable for a plurality of documents.

5. The method according to claim 1, wherein said domain model comprises an object-oriented domain model independent of any document to be rendered, said domain model being usable for any of a plurality of documents and consistency of the document model is maintained based on said linking.

5    6. The method according to claim 1, wherein a plurality of documents are configurable from the domain model.

7. The method according to claim 1, wherein said domain model comprises a stand-alone domain model, which is built separate and independent from a document.

10    8. A system for linking domain components and document components, comprising:  
            a domain object model including domain components; and  
            a document object model linked to said domain object model.

60    9. The system as claimed in claim 8, wherein said domain components of said domain object model are selectively manipulated during an interactive document configuration process.

15    10. The system as claimed in claim 9, wherein said domain components of said domain object model are selectively deleted, edited, and inserted during an interactive document configuration process.

11. The system as claimed in claim 8, wherein said document components comprise variable elements.

12. The system as claimed in claim 11, wherein said variable elements are linked to elements of a domain model.

5 13. The system as claimed in claim 12, wherein said domain model is linked to document components from at least one document.

14. The system, as claimed in claim 12, wherein a change in said domain element changes a value of said variable elements linked to said domain element of said domain object model.

15. The system as claimed in claim 10, wherein said document component variable elements are linked to domain object properties via an expression written in a domain model access language.

16. The system as claimed in claim 15, wherein one of said document component variable elements is linked to one of said domain object properties when said expression written in said domain model access language evaluates to a domain object property.

17. The system as claimed in claim 16, wherein a change of said domain object property value changes the value displayed by said content variable.

18. The system as claimed in claim 16, further comprising:

a link manager for evaluating domain model reference expressions and controlling links

5 between content variables and domain object properties.

19. The system as claimed in claim 15, wherein said domain model access language comprises a language for selecting a specific property from the domain object model.

20. The system as claimed in claim 19, wherein said domain model access language comprises an object representation and access language (ORAL).

10 21. A system for linking domain knowledge to document knowledge, comprising:

means for rendering document knowledge as textual components with variable fields;

means for building an object-oriented domain model including domain knowledge; and

means for loosely coupling said document knowledge to said domain knowledge.

22. A method for linking domain components and document components, comprising:

15 providing a domain object model including domain components; and

providing a document object model; and

linking document components in said document object model to said domain components of said domain object model.

23. A method for linking of content variables in document components to domain object properties in a document assembly process, said method comprising:

- 5        evaluating a domain model access language expression for linking a content variable to a domain object;
- managing a link between said content variable and domain object property; and
- re-evaluating all domain model access language expressions after a domain model reorganization.

10      24. A signal-bearing medium tangibly embodying a program of machine readable instructions executable by a digital processing apparatus to perform a method for computer implemented linking of content variables in document components to domain object properties in a document assembly process, said method comprising:

- 15        evaluating a domain model access language expression for linking a content variable to a domain object;
- managing a link between said content variable and domain object property; and
- re-evaluating all domain model access language expressions after a domain model reorganization.

25. A signal-bearing medium tangibly embodying a program of machine readable instructions executable by a digital processing apparatus to perform a computer-implemented method of linking domain knowledge to document knowledge, said method comprising:

rendering document knowledge as textual components with variable fields;

5 building an object-oriented domain model including domain knowledge; and  
linking said document knowledge to said domain knowledge.

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